CLAIMS

What is claimed is:

1.   A method of verifying that devices in a network are properly
5   connected physically, said method comprising:

receiving from a device in said network a listing that identifies other devices coupled to said device and that identifies which communication port of said device each of said other devices is coupled to;

comparing said listing against reference information representing a
10   design of said network; and

identifying discrepancies between said listing and said reference information.

2.   The method of Claim 1 wherein said reference information
15   comprises a map of said network.

3.   The method of Claim 1 wherein said reference information comprises, for each of said devices in said network, identification of the type of device and a media access control (MAC) address for each respective
20   network interface cards.

4.   The method of Claim 1 wherein said reference information comprises identification of a source and a destination for a network cable.

25   5.   The method of Claim 4 wherein said reference information comprises a socket identifier for a source device coupled to said network cable and a socket identifier for a destination device coupled to said network cable.

30   6.   The method of Claim 1 wherein said listing comprises a MAC address table.

7.   The method of Claim 1 further comprising:
issuing a command to view said listing.
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8.   The method of Claim 1 wherein said comparing comprises:
comparing port numbers for said other devices in said listing against port numbers for said other devices in said reference information.

9.   The method of Claim 1 further comprising:
generating a report identifying said discrepancies.

10.   The method of Claim 9 wherein said report further comprises information identifying an incorrectly placed network cable, device and port identifiers indicating wherein said incorrectly placed network cable is inserted, and device and port identifiers identifying where said incorrectly placed network cable should be inserted.

11.   The method of Claim 1 further comprising:
generating a report identifying instances in which said reference information and said listing are in agreement.

12.   The method of Claim 1 further comprising:
generating a report identifying instances in which connections between devices cannot be verified.

13.   The method of Claim 1 further comprising:
sending a signal over a physical connection between devices of said network to verify integrity of said physical connection.

14.   The method of Claim 1 wherein said devices are selected from the group consisting of switches, routers, computers, load balancers, and firewalls.

15.   A computer system comprising:
a memory unit; and
a processor coupled to said memory unit, said processor for verifying that devices in a network are properly connected physically, said method comprising:
processing connection information received from a device, wherein said connection information identifies other devices coupled to said device and also identifies which communication port of said device each of said other devices is coupled to;
evaluating said connection information against reference information that describes an arrangement of said network; and
identifying differences between said connection information and said reference information.

16.   The computer system of Claim 15 wherein said reference information comprises a computer-readable version of a map of said network.

17.   The computer system of Claim 15 wherein said reference information comprises, for each of said devices in said network, identification of the type of device and a media access control (MAC) address for each respective network interface cards.

18.   The computer system of Claim 15 wherein said reference information comprises a socket identifier for a source device coupled to a network cable and a socket identifier for a target device coupled to said network cable.

19.   The computer system of Claim 15 wherein said connection information comprises a MAC address table for said device.

20.   The computer system of Claim 15 wherein said evaluating comprises:
    searching said connection information for a MAC address associated with each of said other devices;
    locating in said connection information a port number associated with a respective MAC address; and
    comparing said port number in said connection information against a respective port number in said reference information.

21.   The computer system of Claim 15 wherein said method further comprises:
    producing a report summarizing results of said evaluating.

22.   The computer system of Claim 15 wherein said method further comprises:
    causing a signal to be sent over a cable connecting devices in said network to verify the physical integrity of said cable.

23.   A computer-usable medium having computer-readable program code embodied therein for causing a computer system to perform a method of verifying that devices in a network are properly connected physically, said method comprising:

accessing first information that describes a configuration of said network including connections between said devices;

accessing second information received from said devices, said second information describing actual connections between said devices;

5   comparing said first information and said second information; and

generating a message when there is a difference between said first information and said second information.

24.   The computer-usable medium of Claim 23 wherein said first

10   information is derived from a computer-readable map of said network.

25.   The computer-usable medium of Claim 23 wherein said first information comprises, for each of said devices in said network, identification of the type of device and a media access control (MAC) address for each

15   respective network interface card.

26.   The computer-usable medium of Claim 23 wherein said first information comprises a socket identifier for a source device coupled to a network cable and a socket identifier for a destination device coupled to said

20   network cable.

27.   The computer-usable medium of Claim 23 wherein said second information comprises MAC address tables resident on said devices.

25   28.   The computer-usable medium of Claim 23 wherein said computer-readable program code embodied therein causes a computer system to perform said method comprising:

producing a report comprising said message.

30   29.   The computer-usable medium of Claim 23 wherein said message further comprises information identifying an incorrectly placed network cable, device and port identifiers indicating wherein said incorrectly placed network cable is inserted, and device and port identifiers identifying where said incorrectly placed network cable should be inserted.

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30.   The computer-usable medium of Claim 23 wherein said computer-readable program code embodied therein causes a computer system to perform said method comprising:

causing signals to be sent over cables connecting said devices.